

09/825,244

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Term: L1 and (nucleic acid or polynucleotide or oligonucleotide)

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Search History

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result set

DB=USPT,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ

<u>L2</u>	L1 and (nucleic acid or polynucleotide or oligonucleotide)	19	<u>L2</u>
<u>L1</u>	link\$ near5 ester near5 esterase near5 cleav\$	33	<u>L1</u>

END OF SEARCH HISTORY

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L2: Entry 19 of 19

File: USPT

Jul 18, 1989

DOCUMENT- IDENTIFIER: US 4849357 A

TITLE: Method for the preparation of a hydrophobic enzyme-containing composition and the composition produced thereby

Brief Summary Paragraph Right (12):

Any hydrophilic, or water-soluble, enzymes can be employed in the composition and method of the present invention, including hydrolases, oxidoreductases (glucose oxidase, xanthic oxidase, amino acid oxidase), transferases (transglycosidases, transphosphorylases, phosphomutases, transaminases, transmethylases, transacetylases), desmolases (ligases, lyases) and isomerases (racemases, cis-trans isomerases) and the like. Of these enzymes, the hydrolases are preferred for use in the present compositions. Hydrolases catalyze a wide variety of hydrolytic reactions, including (a) the cleavage of ester linkages (esterases such as lipases, phosphoric mono- and di-esterhydrolases such as phosphatases), (b) the cleavage of glycosides (carbohydrases such as polysaccharidases, e.g., levan hydrolase, cellulase, amylase, ligninolase and the like). (c) the cleavage of peptide linkages (proteases such as alpha-aminopeptide amino acid hydrolases, alpha-carboxypeptide amino acid hydrolases) and the cleavage of nucleic acids (nucleases).

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```
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NEWS 10 Nov 19 TOXCENTER(SM) - new toxicology file now available on STN
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NEWS 13 Nov 30 Files VETU and VETB to have open access
NEWS 14 Dec 10 WPINDEX/WPIDS/WPIX New and Revised Manual Codes for 2002
NEWS 15 Dec 10 DGENE BLAST Homology Search
NEWS 16 Dec 17 WELDASEARCH now available on STN
NEWS 17 Dec 17 STANDARDS now available on STN
NEWS 18 Dec 17 New fields for DPCI
NEWS 19 Dec 19 CAS Roles modified
NEWS 20 Dec 19 1907-1946 data and page images added to CA and CPlus
NEWS 21 Jan 25 BLAST(R) searching in REGISTRY available in STN on the Web
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NEWS 24 Feb 01 DKILIT now produced by FIZ Karlsruhe and has a new update frequency
NEWS 25 Feb 19 Access via Tymnet and SprintNet Eliminated Effective 3/31/02
NEWS 26 Mar 08 Gene Names now available in BIOSIS

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```
=> file uspat biosis caplus medline
'USPAT' IS AN AMBIGUOUS FILE OR CLUSTER NAME
USPATALL      - US Patent Full Text Cluster
USPAT2        - U.S. Patents Latest Publications from 2001 - present
USPATFULL     - U.S. Patents Original Publications from 1971 - present
ENTER FILE OR CLUSTER NAME (IGNORE):end
```

```
=> uspatful biosis caplus medline
USPATFUL IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).
```

```
=> s link?(10a) (amino acid1 or peptide#1) (10a) cleav?
1 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).
```

```
=> s link?(10a) (amino acid# or peptide#) (10a) cleav?
THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE
Some commands only work in certain files. For example, the EXPAND
command can only be used to look at the index in a file which has an
index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of
commands which can be used in this file.
```

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	1.20	1.20

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FILE 'MEDLINE' ENTERED AT 15:15:56 ON 18 MAR 2002

```
=> s link#(10a) (amino acid# or peptide#) (10a) cleav?
L1      94 LINK#(10A) (AMINO ACID# OR PEPTIDE#) (10A) CLEAV?

=> s link#(10a) (amino acid# or peptide# or oligosaccharide#) (10a) cleav?
L2      106 LINK#(10A) (AMINO ACID# OR PEPTIDE# OR OLIGOSACCHARIDE#) (10A)
      CLEAV?

=> s l2 and (oligonucleotide# or nuleic acid# or polypeptide#)
L3      5 L2 AND (OLIGONUCLEOTIDE# OR NULEIC ACID# OR POLYPEPTIDE#)
```

=> d l3 1-5 bib ab

L3 ANSWER 1 OF 5 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1991:453681 BIOSIS
DN BA92:98461
TI CLEAVAGE OF VASOACTIVE INTESTINAL PEPTIDE AT MULTIPLE SITES BY
AUTOANTIBODIES.
AU PAUL S; MEI S; MODY B; EKLUND S H; BEACH C M; MASSEY R J; HAMEL F
CS DEP. PHARMACOL., BIOCHEM. INTERNAL MED., UNIVERSITY NEBRASKA MEDICAL

SO CENTER, OMAHA, NEBR. 68198-16134.
J BIOL CHEM, (1991) 266 (24), 16128-16134.
CODEN: JBCHA3. ISSN: 0021-9258.
FS BA; OLD
LA English
AB Vasoactive intestinal peptide (VIP) fragments generated by autoantibodies purified from the blood of two human beings were separated and sequenced. Based on the identity of these fragments, seven peptide bonds cleaved by the antibodies were identified. Six of the seven scissile bonds are clustered in the region of VIP spanning residues 14-22 and were cleaved by antibodies from both human subjects. The seventh scissile bond is located at residues 7-8 and was **cleaved** by antibodies from one of the subjects. The scissile bonds **link amino acid** residues with different size, charge, and hydrophobicity. The hydrolytic activity of the antibodies was selective in that they failed to hydrolyze **polypeptide** unrelated in sequence to VIP (insulin and atrial natriuretic peptide). These observations demonstrate substrate specific hydrolysis by naturally occurring antibodies and expand the range of peptide bonds hydrolyzed by these antibodies.

L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2002 ACS
AN 1999:614079 CAPLUS
DN 131:225480
TI A protease-activated reporter enzyme for screening for proteases, their cleavage sites, and cellular regulators of proteinase activity
IN Hay, Bruce A.; Hawkins, Christine V.
PA California Institute of Technology, USA
SO PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 9947640	A1	19990923	WO 1999-US6070	19990319
	W: CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	US 1998-78721P	P	19980320		
	US 1999-270983	A	19990317		
RE.CNT 4	THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L3 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2002 ACS

AN 1950:33320 CAPLUS
DN 44:33320
OREF 44:6390d-h
TI New synthesis of **polypeptides** by condensation of amides of hydroxy acids
AU Bresler, S. E.; Selezneva, N. A.
CS Leningrad Phys. Tech. Inst., Acad. Sci., U.S.S.R.
SO Zhur. Obshchey Khim. (J. Gen. Chem.) (1950), 20, 356-00
DT Journal
LA Unavailable
AB AcNH₂ (40 g.) in 100 ml. abs. EtOH refluxed 20-30 min. with 11.5 g. EtONa gave a cryst. product which was taken up in more EtOH and satd. with dry HCl, filtered, and evapd., yielding 100% AcNHET-HCl, m. 59.degree.. No by-products were detected. Hence the reaction was applied to the derivs. of HO acids to form polymeric products. Lactic acid was converted by treatment of the Et ester with NH₃ into the amide which, boiled with Na in dioxane, yielded the Na deriv., MeCH(ONA)CONH₂, m. 26.degree.. The product (8 g.) heated in an evacuated tube 3-4 weeks to 80.degree. gave a transparent resin, which was treated in EtOH with dry HCl, filtered, and evapd., yielding a clear resin, decomp. 105.degree. without melting; it is sol. in H₂O, less in EtOH, insol. in Et₂O, dioxane, or Me₂CO. Condensation for 5-7 days gives a softer resin. Condensation of the free amide with metallic Na at 110.degree. gave a dark product and considerable NH₃. Hydrolysis of the product by alc. aq. HCl at 33.degree. in 22 hrs. gave 40% **cleavage** of the **peptide links**, while pancreatin gave 45% hydrolysis in 10 hrs. In both cases alanine was the end product, hence the resin was a **polypeptide** of polyalanine type. Adsorption on charcoal and refractometric examn. of the soln. established the polymeric nature of the product and its hydrolyzates. Polarimetric examn. showed 89% retention of the L-configuration. Mol. wt. by viscosity detns. gave 5000-6000 av. mol. wts.

L3 ANSWER 4 OF 5 MEDLINE
AN 97238549 MEDLINE
DN 97238549 PubMed ID: 9131999
TI Chemical cross-linking of the human immunodeficiency virus type 1 Tat protein to synthetic models of the RNA recognition sequence TAR containing site-specific trisubstituted pyrophosphate analogues.
AU Naryshkin N A; Farrow M A; Ivanovskaya M G; Oretskaya T S; Shabarova Z A; Gait M J
CS Laboratory of Molecular Biology, Medical Research Council, Cambridge, U.K.
SO BIOCHEMISTRY, (1997 Mar 25) 36 (12) 3496-505.
Journal code: A0G; 0370623. ISSN: 0006-2960.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199704
ED Entered STN: 19970507
Last Updated on STN: 19970507
Entered Medline: 19970429
AB A chemical ligation procedure has been developed for the synthesis of oligoribonucleotides carrying a trisubstituted pyrophosphate (tsp) linkage in place of a single phosphodiester. Good yields of tsp were obtained when a single 2'-deoxynucleoside 5' to the tsp was used in the ligation reaction. A tsp linkage was found to be reasonably stable to hydrolysis but cleaved by treatment with ethylenediamine or lysine to give phosphoamidate adducts. A model human immunodeficiency virus type 1 (HIV-1) TAR RNA duplex containing an activated tsp was able to bind to HIV-1 Tat protein with only 3-fold reduced affinity and to a Tat peptide (residues 37-72) with identical affinity compared to that of an unmodified duplex. Tsp incorporated at sites previously identified as being in close proximity to Tat protein were able to cross-link to Tat

peptide (37-72) to form a covalent phosphoamidate conjugate. Endopeptidase **cleavage** followed by MALDI-TOF (matrix-assisted laser desorption ionization time of flight) mass spectrometric analysis provided strong evidence that a TAR duplex containing a tsp replacing the phosphate at 38-39 had reacted specifically with Lys51 in the basic region of Tat peptide (37-72). The new chemical cross-linking method may be generally useful for identifying lysines in close proximity to phosphates in basic RNA-binding domains of proteins.

L3 ANSWER 5 OF 5 MEDLINE
AN 91340765 MEDLINE
DN 91340765 PubMed ID: 1874750
TI Cleavage of vasoactive intestinal peptide at multiple sites by autoantibodies.
AU Paul S; Mei S; Mody B; Eklund S H; Beach C M; Massey R J; Hamel F
CS Department of Pharmacology, University of Nebraska Medical Center, Omaha 68198-6260.
NC 40348
44126
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1991 Aug 25) 266 (24) 16128-34.
Journal code: HIV; 2985121R. ISSN: 0021-9258.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199109
ED Entered STN: 19911013
Last Updated on STN: 19911013
Entered Medline: 19910926
AB Vasoactive intestinal peptide (VIP) fragments generated by autoantibodies purified from the blood of two human beings were separated and sequenced. Based on the identity of these fragments, seven peptide bonds cleaved by the antibodies were identified. Six of the seven scissile bonds are clustered in the region of VIP spanning residues 14-22 and were cleaved by antibodies from both human subjects. The seventh scissile bond is located at residues 7-8 and was **cleaved** by antibodies from one of the subjects. The scissile bonds **link amino acid** residues with different size, charge, and hydrophobicity. The hydrolytic activity of the antibodies was selective in that they failed to hydrolyze **polypeptides** unrelated in sequence to VIP (insulin and atrial natriuretic peptide). These observations demonstrate substrate specific hydrolysis by naturally occurring antibodies and expand the range of peptide bonds hydrolyzed by these antibodies.

=> s 12 and (oligonucleotide# or polynucleotide# or nucleic acid#)
2 FILES SEARCHED...
L4 3 L2 AND (OLIGONUCLEOTIDE# OR POLYNUCLEOTIDE# OR NUCLEIC ACID#)
=> d 14 1-3 bib ab

L4 ANSWER 1 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1996:70626 BIOSIS
DN PREV199698642761
TI Identification of the nicking tyrosine of geminivirus Rep protein.
AU Laufs, Juergen; Schumacher, Silke; Geisler, Norbert; Jupin, Isabelle; Gronenborn, Bruno (1)
CS (1) Inst. Sci. Vegetales, CNRS, Ave. de la Terrasse, 91198 Gif sur Yvette Cedex France
SO FEBS Letters, (1995) Vol. 377, No. 2, pp. 258-262.
ISSN: 0014-5793.
DT Article
LA English
AB The replication initiator (Rep) proteins of geminiviruses perform a DNA

cleavage and strand transfer reaction at the viral origin of replication. As a reaction intermediate, Rep proteins become covalently linked to the 5' end of the cleaved DNA. We have used tomato yellow leaf curl virus Rep protein for in vivo and in vitro analyses. Isolating a covalent peptide-nucleotide complex, we have identified the **amino acid** of Rep which mediates **cleavage** and **links** the protein to DNA. We show that tyrosine-103, located in a conserved sequence motif, initiates DNA cleavage and is the physical link between geminivirus Rep protein and its origin DNA.

L4 ANSWER 2 OF 3 MEDLINE
AN 2000060989 MEDLINE
DN 20060989 PubMed ID: 10595540
TI Mapping of ATP binding regions in poly(A) polymerases by photoaffinity labeling and by mutational analysis identifies a domain conserved in many nucleotidyltransferases.
AU Martin G; Jeno P; Keller W
CS Department of Cell Biology, Biozentrum, University of Basel, Switzerland.
SO PROTEIN SCIENCE, (1999 Nov) 8 (11) 2380-91.
Journal code: BNW; 9211750. ISSN: 0961-8368.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200001
ED Entered STN: 20000124
Last Updated on STN: 20000124
Entered Medline: 20000107
AB We have identified regions in poly(A) polymerases that interact with ATP. Conditions were established for efficient cross-linking of recombinant bovine and yeast poly(A) polymerases to 8-azido-ATP. Mn²⁺ strongly stimulated this reaction due to a 50-fold lower *Ki* for 8-azido-ATP in the presence of Mn²⁺. Mutations of the highly conserved Asp residues 113, 115, and 167, critical for metal binding in the catalytic domain of bovine poly(A) polymerase, led to a strong reduction of cross-linking efficiency, and Mn²⁺ no longer stimulated the reaction. Sites of 8-azido-ATP cross-linking were mapped in different poly(A) polymerases by CNBr-**cleavage** and analysis of tryptic **peptides** by mass spectroscopy. The main cross-link in *Schizosaccharomyces pombe* poly(A) polymerase could be assigned to the peptide DLELSDNNLLK (amino acids 167-177). Database searches with sequences surrounding the cross-link site detected significant homologies to other nucleotidyltransferase families, suggesting a conservation of the nucleotide-binding fold among these families of enzymes. Mutations in the region of the "helical turn motif" (a domain binding the triphosphate moiety of the nucleotide) and in the suspected nucleotide-binding helix of bovine poly(A) polymerase impaired ATP binding and catalysis. The results indicate that ATP is bound in part by the helical turn motif and in part by a region that may be a structural analog to the fingers domain found in many polymerases.

L4 ANSWER 3 OF 3 MEDLINE
AN 97238549 MEDLINE
DN 97238549 PubMed ID: 9131999
TI Chemical cross-linking of the human immunodeficiency virus type 1 Tat protein to synthetic models of the RNA recognition sequence TAR containing site-specific trisubstituted pyrophosphate analogues.
AU Naryshkin N A; Farrow M A; Ivanovskaya M G; Oretskaya T S; Shabarova Z A; Gait M J
CS Laboratory of Molecular Biology, Medical Research Council, Cambridge, U.K.
SO BIOCHEMISTRY, (1997 Mar 25) 36 (12) 3496-505.
Journal code: A0G; 0370623. ISSN: 0006-2960.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)

LA English
FS Priority Journals
EM 199704
ED Entered STN: 19970507
Last Updated on STN: 19970507
Entered Medline: 19970429
AB A chemical ligation procedure has been developed for the synthesis of oligoribonucleotides carrying a trisubstituted pyrophosphate (tsp) linkage in place of a single phosphodiester. Good yields of tsp were obtained when a single 2'-deoxynucleoside 5' to the tsp was used in the ligation reaction. A tsp linkage was found to be reasonably stable to hydrolysis but cleaved by treatment with ethylenediamine or lysine to give phosphoamidate adducts. A model human immunodeficiency virus type 1 (HIV-1) TAR RNA duplex containing an activated tsp was able to bind to HIV-1 Tat protein with only 3-fold reduced affinity and to a Tat peptide (residues 37-72) with identical affinity compared to that of an unmodified duplex. Tsp incorporated at sites previously identified as being in close proximity to Tat protein were able to cross-link to Tat peptide (37-72) to form a covalent phosphoamidate conjugate. Endopeptidase cleavage followed by MALDI-TOF (matrix-assisted laser desorption ionization time of flight) mass spectrometric analysis provided strong evidence that a TAR duplex containing a tsp replacing the phosphate at 38-39 had reacted specifically with Lys51 in the basic region of Tat peptide (37-72). The new chemical cross-linking method may be generally useful for identifying lysines in close proximity to phosphates in basic RNA-binding domains of proteins.

=> d 14 1-3 kwic

L4 ANSWER 1 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB . . . curl virus Rep protein for in vivo and in vitro analyses. Isolating a covalent peptide-nucleotide complex, we have identified the amino acid of Rep which mediates cleavage and links the protein to DNA. We show that tyrosine-103, located in a conserved sequence motif, initiates DNA cleavage and is the. . . .

IT Miscellaneous Descriptors

DNA CLEAVAGE; PROTEIN-NUCLEIC ACID INTERACTION;
REPLICATION INITIATION; 103-TYROSINE

L4 ANSWER 2 OF 3 MEDLINE

AB . . . cross-linking efficiency, and Mn²⁺ no longer stimulated the reaction. Sites of 8-azido-ATP cross-linking were mapped in different poly(A) polymerases by CNBr-cleavage and analysis of tryptic peptides by mass spectroscopy. The main cross-link in *Schizosaccharomyces pombe* poly(A) polymerase could be assigned to the peptide DLELSDNNLLK (amino acids 167-177). Database searches with sequences surrounding. . . .

CT . . .

Sequence Data

Mutagenesis, Site-Directed
Nucleotidyltransferases: CH, chemistry
Nucleotidyltransferases: ME, metabolism
Peptide Fragments: CH, chemistry
Peptide Fragments: ME, metabolism
Peptide Mapping
*Polynucleotide Adenylyltransferase: CH, chemistry
*Polynucleotide Adenylyltransferase: ME, metabolism
Protein Conformation
Recombinant Proteins: CH, chemistry
Recombinant Proteins: ME, metabolism
Schizosaccharomyces: EN, enzymology
Sequence Alignment
Sequence Homology,

CN 0 (Affinity Labels); 0 (Azides); 0 (Peptide Fragments); 0 (Recombinant Proteins); EC 2.7.7 (Nucleotidyltransferases); EC 2.7.7.19 (**Polynucleotide Adenylyltransferase**)

L4 ANSWER 3 OF 3 MEDLINE

AB . . . an unmodified duplex. Tsps incorporated at sites previously identified as being in close proximity to Tat protein were able to cross-link to Tat **peptide** (37-72) to form a covalent phosphoamidate conjugate. Endopeptidase **cleavage** followed by MALDI-TOF (matrix-assisted laser desorption ionization time of flight) mass spectrometric analysis provided strong evidence that a TAR duplex. . .

CT . . .

Products, tat: CS, chemical synthesis

*Gene Products, tat: ME, metabolism

*HIV Long Terminal Repeat

*HIV-1

*Models, Chemical

Molecular Sequence Data

Oligonucleotides: CS, chemical synthesis

Oligonucleotides: CH, chemistry

Peptide Fragments: CH, chemistry

Peptide Fragments: ME, metabolism

*RNA, Viral: ME, metabolism

Spectrometry, Mass, Matrix-Assisted Laser Desorption-Ionization

CN 0 (Cross-Linking Reagents); 0 (Diphosphates); 0 (Gene Products, tat); 0 (**Oligonucleotides**); 0 (Peptide Fragments); 0 (RNA, Viral)

=>